

ABSTRACT OF THE DISCLOSURE

A method and system for detecting, locating and quantifying a physical phenomena such as strain or a deformation in a structure. A minimum resolvable distance along the structure is selected and a quantity of laterally adjacent conductors is determined. Each conductor includes a plurality of segments coupled in series which define the minimum resolvable distance along the structure. When a deformation occurs, changes in the defined energy transmission characteristics along each conductor are compared to determine which segment contains the deformation.